

### **DRAWING AMENDMENTS**

The attached drawing sheet includes new Figure 6. This drawing figure is part of U.S. Patent Application Serial No. 10/749,084, which was previously incorporated into the current application by reference (note page 8, lines 23-26). This drawing figure is now presented for the first time in the present application.

### **REMARKS**

The applicant has carefully reviewed and considered the Office Action of 24 July 2006. In response, the applicant submits claim revisions. Specifically, claim 41 is now withdrawn in accordance with the Examiner's comments presented on page 2 of the Office Action. The claims otherwise remain unchanged.

#### **Claims 9-11 and 42-44 are fully enabled and meet the requirements of 25 USC Section 112, first paragraph**

Claims 9-11 and 42-44 are fully enabled in the present specification. More specifically, enablement is provided at, for example, page 8, lines 21-26 and as illustrated in Figure 4. Here it is significant to note that the specification references related U.S. Patent Application Serial No. 10/749,084 filed December 30, 2003, which is incorporated in its entirety by reference. A copy of this application, Publication No. US2005/0148259 A1 is incorporated herein as Exhibit A. Full and complete disclosure respecting the subject matter of claims 9-11 and 42-44 is found throughout this document including but not limited to the text in paragraphs 28-31 and claims 11-13 and drawing Figure 6. For clarity and convenience, the Applicants have now amended the present specification to include Figure 6 and the subject matter of the text from paragraphs 28-31 of U.S. Patent Application Serial No. 10/749,084, which had previously been incorporated by reference.

Based upon this disclosure, the rejection of claims 9-11 and 42-44 under USC Section 112, first paragraph is improper and should be withdrawn.

**Claims 1, 3, 5, 9-13, 15, 38-40 and 42-46 Clearly Patentably Distinguish  
Over U.S. Patent 6,497,950 to Haile et al when Considered in  
Combination with U.S. Patent 5,660,908 to Kelman et al**

Initially, the Applicants note that the Examiner previously sought to reject claims 1, 3, 5, 9-13 and 15 using the Kelman et al reference as the primary reference and the Haile et al reference as the secondary reference. That rejection was overcome in the last response. The Applicants fail to understand how reversing the references and utilizing the Haile et al patent as the primary reference and the Kelman et al reference as the secondary reference makes the rejection based upon these two prior art references proper.

Whether it is considered as the primary reference or the secondary reference, the Kelman et al patent very clearly relates to a “recyclable” automotive headliner consisting of 100% polyethylene terephthalate (PET) material. In fact, the Kelman et al reference explicitly states at Column 1, lines 31-35, “[a]n object of the present invention is to provide a high strength automotive headlines that can be scrapped and recycled without separating the constituent parts thereof and to do so by an automotive headliner that consists 100% of PET material.”

Clearly the intended purpose of the secondary reference to Kelman et al is to provide a headliner of 100% PET material that is easily recycled. In order to provide the desired “additional stiffness and shape-retention properties to the headliner” (see column 2, line 54), the Kelman et al patent explicitly teaches providing a scrim layer 26 that is bonded to the backside of the bat and spans the corrugations or reverse ribs 18.

In stark and total contrast to the Kelman et al patent the Haile et al patent refers to headliners made from bicomponent fibers. However, it is significant to note that those bicomponent fibers are made from mixed polymers. More specifically, as stated in column 13, lines 39-49:

“In a bicomponent fiber of the invention, the polyesters of this invention will be present in amounts of about 10 to about 75 weight % of the bicomponent fiber. The other component may be selected from a wide range of other polymeric materials including, but not limited to, polyesters such as polyethylene terephthalate (PET), polytrimethylene terephthalate (PTT), polybutylene terephthalate (PBT), polycyclohexylenedimethylene terephthalate polyesters (PCT), polyethylene naphthalenedicarboxylate (PEN), and polylactic acid based polymers or mixtures thereof.”

Significantly, Haile et al specifically teaches polyester formulations that are chemically modified to provide the desired shape retention. More specifically, the claimed polyesters include a dicarboxylic acid component selected from a group consisting of acids, esters, acid chlorides, anhydrides and mixtures thereof, of an aromatic dicarboxylic acid having from about 8 to about 14 carbon atoms, an aliphatic dicarboxylic acid containing about 4 to about 12 carbon atoms, a cycloaliphatic dicarboxylic acid having about 8 to about 12 carbon atoms or mixtures thereof. Further, the glycol component comprises less than about 20 mol% of ethylene glycol or diethylene glycol and more than about 50 mol% of a

4-carbon glycol, a 6-carbon glycol or mixtures thereof. Further, the dicarboxylic acid component contains up to about 45 mol% of at least one acid, ester, acid chloride or anhydride of the aliphatic dicarboxylic acid. (See claim 1). This unique chemical formulation provides the polyesters of the invention with “elastic bonds which are less susceptible to cracking when subjected to repeated flexing. Thus, preferred fibers of the invention are capable of maintaining the shape and appearance of the bonded product over time.” See column 3, lines 2-7. As further stated in Hail et al, “... headliners and seating components in an automobile formed of the polyesters of the invention preferably do not soften or sag when exposed to elevated summer temperatures which may be as high as 110E C in a closed car.” (See column 10, lines 54-58). As further stated at column 12, lines 32-45:

“Fibers formed from the polyesters of the invention may possess higher elastic properties than polyethylene terephthalate polyester fibers as measured by ASTM D 1774-94. For example. By this test, work recovery, specifically the amount of work recovered from the total amount of work required to extend the fiber to 10% elongation, is 4% for a fiber from Example 1, described below, compared to 41% for polyethylene terephthalate. Because of this distinct property improvement, the fibers of the invention can create highly recoverable, elastic bonds in laminated, molded and other bonded structures. These elastic bonds are less susceptible to

cracking when subjected to repeated flexing and can aid in maintaining the shape and appearance of the bonded product over time.”

Stated another way, the Haile et al patent explicitly teaches that the desired rigidity and shape retention for headliners is obtained by the unique chemical formulation of the polyesters of the Haile et al patent. Consequently, there is certainly no teaching in this reference to lead one skilled in the art to provide a headliner with any structural modifications such as the incorporations of ribs in order to provide additional rigidity and shape retention properties.

While the Kelman et al reference explicitly teaches that ribs may be provided to enhance stiffness and shape retention properties, Kelman et al only teaches utilizing such structures in headliners made from 100% PET material. In effect, the Haile et al patent teaches the use of particular engineered polyesters for headliners wherein the headliners are provided with the desired rigidity and shape retention through the chemical formulation of the polyesters. The Haile et al patent essentially teaches away from the present invention since ribs are not required to meet the rigidity and shape retention needs of the headliner. Thus, on its face, there is no motivation in Haile et al to lead one skilled in the art to combine its teachings with those of the Kelman et al patent as suggested by the Examiner. In contrast, the Kelman et al patent teaches providing ribs in a headliner made from 100% PET material in order to provide the desired stiffness and shape retention. This teaching in and of itself does not suggest any

combination with the structure in Haile et al where desired rigidity and shape retention are already provided by the use of completely different materials.

To summarize, the present rejection is improper since the Examiner has presented no line of reasoning as to why the artisan viewing only the collective teachings of the references would have found it obvious to selectively pick and choose various elements and/or concepts from the references relied on to arrive at the claimed invention. It is only with hindsight and in reliance upon the knowledge and teaching of the present invention that motivation exists for combining the references in the manner suggested by the Examiner. As noted by the Board of Patent Appeals and Interferences in *Ex Parte Clap*, 227 USPQ 972 (Board of Patent Appeals and Interferences 1985), “simplicity and hindsight are not proper criteria for resolving the issue of obviousness.” Accordingly, claims 1, 3, 5, 9-13, 15, 38-40 and 42-46 patentably distinguish over this art and should be allowed.

**Claims 1, 3, 5, 9-13, 15, 38-40 and 42-46 Patentably Distinguish Over the Haile et al and Kelman et al Patents When Considered in Further Combination With U.S. Patent 5,399,422 to Dijkema et al**

As noted above, the Haile et al and Kelman et al patents fail to provide the necessary motivation to support their combination in rejection of the present claims. This is because the Haile et al patent explicitly teaches that headliners made with the polyesters in that invention inherently include the desired stiffness and shape retention properties and, accordingly, there is no motivation provided in the primary reference to seek another solution. Further, there is certainly no

motivation to seek a solution as taught in the Kelman et al reference which explicitly relates to a headliner made from 100% PET material. In fact, Haile et al explicitly teaches that the claimed polyesters are superior to PET materials such as used in Kelman et al (see column 12, lines 32-45 of Haile et al). The teachings in these two references are simply unreconcilable and any proposed combination is contraindicated.

The secondary reference to Dijkema et al reference is cited for its disclosure to use glass staple fibers in headliners. While it might be obvious to utilize glass staple fibers in a headline incorporating the polyesters taught in Haile et al, it must not be overlooked that Haile et al explicitly teaches the desired stiffness and shape retention are inherent in those headliners due to the formulation of the polyesters. Accordingly, there are absolutely no teachings in the combined references to lead one skilled in the art to incorporate ribs in those headliners regardless of the teachings of Kelman et al. Further, since Kelman et al only teaches headliners made of 100% PET materials, the use of glass fibers as taught in Dijkema et al is contraindicated. Thus, the rejection of these claims is improper in view of this art and these claims should be allowed.

**Claims 4 and 8 Very Clearly Patentably Distinguish Over the Haile et al  
and Kelman et al Patents When Considered in Further  
Combination with U.S. Patent 5,892,187 to Patrick**

As noted above the Haile et al and Kelman et al references are not properly combined. Specifically, the teachings of those references simply fail to support



the modification and combination of those references as suggested by the Examiner. The additional secondary reference to Patrick is cited for its disclosure relating to the varying of the distance between ribs and the width of ribs. While the teachings of Patrick may be relevant to the rib structure as taught in Kelman et al the primary reference to Haile et al clearly indicates that a rib structure is unnecessary in order to provide the desired shape retention to a headliner. Accordingly, the references in combination fail to teach or suggest the invention and claims 4 and 8 should be allowed.

**Claims 4 and 8 Clearly Patentably Distinguish Over the Haile et al  
and Kelman et al Patents When Considered in Further  
Combination with the Dijkema et al and Patrick Patents**


As noted above, the Haile et al patent explicitly relates to the concept of providing a headliner made from polyester materials that are chemically modified to provide the necessary and desired stiffness and shape retention. Consequently, the Haile et al patent explicitly teaches away from the concept of providing such a headliner with structural ribs as these are simply unnecessary. Accordingly, there is no basis on the record to combine the Haile et al reference with the Kelman et al reference or the Patrick reference, which relate to ribs. Consequently this rejection fails and claims 4 and 8 should be found to patentably distinguish over the prior art and should be allowed.

**D. Conclusion.**

In summary, all the pending claims patentably distinguish over the art and should be formally allowed. Upon careful review and consideration it is believed the Examiner will agree with this proposition. Accordingly, the early issuance of a formal Notice of Allowance is earnestly solicited.

Any fees required in connection with this Amendment may be debited to Deposit Account 50-0568.

Respectfully submitted,

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